IN THE CLAIMS:

1. (CANCELLED)

2. (CURRENTLY AMENDED) In an intermediate node of a data network, the data network having one or more virtual local area networks (VLANs), the intermediate node containing a forwarding database having one or more forwarding database entries, ~~and~~ a method for controlling flooding of packets on a VLAN comprising the steps of:

referencing a media access control (MAC) limit database comprising one or more MAC limit database entries wherein each entry is associated with a VLAN and contains a MAC limit that indicates a number of forwarding database entries which are allowed to ~~may~~ be associated with the VLAN, and a MAC count that indicates a number of forwarding database entries associated with the VLAN;

using the MAC limit database to determine if a MAC count associated with the VLAN matches the MAC limit associated with the VLAN; and

if so, performing an action for controlling the flooding of packets on the VLAN.

3. (PREVIOUSLY PRESENTED) The method of claim 2, the step of using the MAC limit database further comprising:

locating a MAC limit database entry associated with the VLAN; and

comparing the MAC count of the MAC limit database entry with the MAC limit of the MAC limit database entry to determine if the number of forwarding database entries associated with the VLAN matches the limit established for the VLAN.

4. (PREVIOUSLY PRESENTED) The method of claim 2, the step of using the MAC limit database further comprising:

locating a MAC limit database entry associated with the VLAN;

comparing the MAC count of the MAC limit database entry with the MAC limit of the MAC limit database entry to determine if the MAC count matches the MAC limit; and

if not, updating the MAC count.

5. (CURRENTLY AMENDED) The method of claim ~~1~~ 2, the step of performing an action further comprising:

logging a message to a log accessible to the intermediate node.

6. (CURRENTLY AMENDED) The method of claim ~~1~~ 2, the step of performing an action further comprising:

disabling flooding for the VLAN.

7. (CURRENTLY AMENDED) The method of claim ~~1~~ 2, the step of performing an action further comprising:

disabling forwarding packets for the VLAN.

8. (CURRENTLY AMENDED) The method of claim ~~1~~ 2, the step of performing an action further comprising:

disabling learning for the VLAN.

9. (CURRENTLY AMENDED) In an intermediate node of a data network, the data network having one or more virtual local area networks (VLANs), the intermediate node containing a forwarding database having one or more forwarding database entries, a method for controlling flooding of packets on a VLAN comprising the steps of:

establishing a limit that indicates a number of forwarding database entries that ~~may~~ are allowed to be associated with the VLAN;

determining if a number of forwarding database entries associated with the VLAN matches the limit established for the VLAN;

if so, shutting down the VLAN;
acquiring a packet associated with the VLAN;
determining if the VLAN is shut down; and
if so, dropping the packet.

10. (CURRENTLY AMENDED) The method of claim ~~1~~ 2, further comprising:
acquiring a packet wherein the packet is associated with the VLAN;
determining if the forwarding database contains an entry which contains a MAC address that matches a source address contained in the packet;
if not, determining if learning is disabled for the VLAN; and
if not, generating a forwarding database entry that contains the source address of the packet.

11. (CURRENTLY AMENDED) The method of claim ~~1~~ 2, further comprising:
acquiring a packet associated with the VLAN;
determining if the forwarding database contains an entry which contains a MAC address that matches a destination address contained in the packet;
if not, determining if flooding is enabled for the VLAN; and
if so, flooding the packet.

12. (CANCELLED)

13. (CURRENTLY AMENDED) An intermediate node coupled to a data network containing one or more VLANs, the intermediate node comprising:
a forwarding database containing one or more entries wherein each entry is associated with a node accessible to the intermediate node and wherein each entry is associated with a virtual local area network (VLAN);
a media access control (MAC) limit database having one or more MAC limit database entries wherein each entry is associated with a VLAN and contains a MAC limit

that indicates a number of forwarding database entries which ~~may~~ are allowed to ~~be~~ associated with the VLAN and a MAC count that indicates a number of entries in the forwarding database associated with the VLAN; and

a processor configured to, for each VLAN, (i) read a MAC limit associated with the VLAN from the MAC limit database, (ii) read a MAC count associated with the VLAN from the MAC limit database, (iii) determine if the MAC count associated with the VLAN matches the MAC limit associated with the VLAN, and (iv) if so, perform an action for controlling the flooding of packets on the VLAN.

14. (PREVIOUSLY PRESENTED) The intermediate node of claim 13 comprising:

the processor further configured to, for each entry in the forwarding database, compare the MAC count with the MAC limit of the VLAN associated with the forwarding database entry to determine if the MAC count matches the MAC limit.

15. (PREVIOUSLY PRESENTED) The intermediate node of claim 13 comprising:

the processor further configured to update the MAC count if the MAC count does not match the MAC limit.

16. (CURRENTLY AMENDED) The intermediate node of claim ~~12~~13 further comprising:

the processor configured to log a message to a log accessible to the intermediate node.

17. (CURRENTLY AMENDED) The intermediate node of claim ~~12~~13 further comprising:

~~the processor configured~~ the action for controlling the flooding of packets is to disable flooding for the VLAN.

18. (CURRENTLY AMENDED) The intermediate node of claim ~~12~~13 further comprising:

~~the processor configured~~ the action for controlling the flooding of packets is to disable forwarding packets for the VLAN.

19. (CURRENTLY AMENDED) The intermediate node of claim ~~12~~13 further comprising:

~~the processor configured~~ the action for controlling the flooding of packets is to disable learning for the VLAN.

20. (CANCELLED)

21. (CURRENTLY AMENDED) A system comprising:

means for referencing a media access control (MAC) limit database comprising one or more MAC limit database entries wherein each entry is associated with a VLAN and contains a MAC limit that indicates a number of forwarding database entries which ~~may~~ are allowed to be associated with the VLAN and a MAC count that indicates a number of entries in the forwarding database associated with the VLAN;

means for using the MAC limit database to determine if a MAC count associated with the VLAN matches the MAC limit associated with the VLAN; and

means for performing an action for controlling the flooding of packets on the VLAN, if the MAC count associated with the VLAN matches the MAC limit associated with the VLAN.

22. (CURRENTLY AMENDED) A system comprising:

means for establishing a limit wherein the limit indicates a number of entries which ~~may~~ are allowed to be contained in the forwarding database associated with the VLAN;

means for determining if a number of entries in the forwarding database associated with the VLAN matches the limit established for the VLAN;

means for performing an action for controlling the flooding of packets on the VLAN, if the number of entries in the forwarding database associated with the VLAN matches the limit established for the VLAN;

means for accessing an entry in the forwarding database associated with a VLAN;

means for comparing a MAC count with a MAC limit associated with the VLAN to determine if the MAC count matches the MAC limit; and

means for updating the MAC count, if the MAC count does not match the MAC limit.

23. (CANCELLED)

24. (PREVIOUSLY PRESENTED) A method for operating an intermediate network node, comprising:

receiving a packet having a VLAN tag;

looking up a MAC destination address of the VLAN packet in a forwarding table;

looking up, in response to not finding the MAC destination address in the forwarding table, a limit of MAC addresses (MAC limit) of the VLAN; and

performing an action for controlling flooding of packets on the VLAN in response to a count of MAC addresses (MAC count) of the VLAN matching the MAC limit for the VLAN.

25. (PREVIOUSLY PRESENTED) The method of claim 24, further comprising:

logging a message, as the action for controlling flooding on the VLAN.

26. (PREVIOUSLY PRESENTED) The method of claim 24, further comprising:

disabling flooding for the VLAN, as the action for controlling flooding on the VLAN.

27. (PREVIOUSLY PRESENTED) The method of claim 24, further comprising:
disabling learning for the VLAN, as the action for controlling flooding on the VLAN.

28. (PREVIOUSLY PRESENTED) The method of claim 24, further comprising:
shutting down the VLAN, as the action for controlling flooding on the VLAN.

29. (PREVIOUSLY PRESENTED The method of claim 24, further comprising:
in response to receiving a VLAN packet for a shut down VLAN, dropping the packet.

30. (PREVIOUSLY PRESENTED) The method of claim 24, further comprising:
in response to receiving a VLAN packet, looking up a MAC source address of the VLAN packet in the forwarding table;
in response to not finding the MAC source address in the forwarding table, determining if learning is disabled for the VLAN; and
if learning is not disabled for the VLAN, generating a forwarding database entry for the VLAN.

31. (PREVIOUSLY PRESENTED) The method of claim 24, further comprising:
in response to not finding the MAC destination in the forwarding table, determining if flooding is disabled;
if flooding is disabled, dropping the VLAN packet; and
if flooding is not disabled, flooding the VLAN packet out all ports except a receiving port.

32. (PREVIOUSLY PRESENTED) The method of claim 24, further comprising:
looking up the MAC limit for the VLAN in a MAC limit database.

33. (PREVIOUSLY PRESENTED) The method of claim 24, further comprising:

looking up the MAC count for the VLAN in a MAC limit database; and

in response to the MAC count not matching the MAC limit, updating the MAC count in the MAC limit database.

34. (PREVIOUSLY PRESENTED) An intermediate network node coupled to a data network containing one or more VLANs, the intermediate network node comprising:

means for receiving a packet having a VLAN tag;

means for looking up a MAC destination address of the VLAN packet in a forwarding table;

means for looking up, in response to not finding the MAC destination address in the forwarding table, a limit of MAC addresses (MAC limit) of the VLAN; and

means for performing an action for controlling flooding of packets on the VLAN in response to a count of MAC addresses (MAC count) of the VLAN matching the MAC limit for the VLAN.

35. (PREVIOUSLY PRESENTED) The intermediate network node of claim 34, further comprising:

means for logging a message, as the action for controlling flooding on the VLAN.

36. (PREVIOUSLY PRESENTED) The intermediate network node of claim 34, further comprising:

means for disabling flooding for the VLAN, as the action for controlling flooding on the VLAN.

37. (PREVIOUSLY PRESENTED) The intermediate network node of claim 34, further comprising:

means for disabling learning for the VLAN, as the action for controlling flooding on the VLAN.

38. (PREVIOUSLY PRESENTED) The intermediate network node of claim 34, further comprising:

means for shutting down the VLAN, as the action for controlling flooding on the VLAN.

39. (PREVIOUSLY PRESENTED) The intermediate network node of claim 34, further comprising:

means for in response to receiving a VLAN packet for a shut down VLAN, dropping the packet.

40. (CURRENTLY AMENDED) The intermediate network node of claim 34, further comprising:

~~in response to receiving a VLAN packet,~~ means for looking up a MAC source address of the VLAN packet in the forwarding table in response to receiving a VLAN packet;

~~in response to not finding the MAC source address in the forwarding table,~~ means for determining if learning is disabled for the VLAN in response to not finding the MAC source address in the forwarding table; and

~~if learning is not disabled for the VLAN,~~ means for generating a forwarding database entry for the VLAN if learning is not disabled for the VLAN.

41. (CURRENTLY AMENDED) The intermediate network node of claim 34, further comprising:

~~in response to not finding the MAC destination in the forwarding table,~~ means for determining if flooding is disabled in response to not finding the MAC destination in the forwarding table;

~~if flooding is disabled,~~ means for dropping the VLAN packet if flooding is disabled; and

~~if flooding is not disabled,~~ means for flooding the VLAN packet out all ports except a receiving port if flooding is not disabled.

42. (CURRENTLY AMENDED) The intermediate network node of claim 34, further comprising:

means for looking up the MAC limit for the VLAN in a MAC limit database.

43. (CURRENTLY AMENDED) The ~~method~~ intermediate network node of claim 34, further comprising:

means for looking up the MAC count for the VLAN in a MAC limit database; and

~~in response to the MAC count not matching the MAC limit,~~ means for updating the MAC count in the MAC limit database in response to the MAC count not matching the MAC limit.

44. (CURRENTLY AMENDED) An intermediate network node coupled to a data network containing one or more VLANs, the intermediate network node comprising:

one or more line cards configured to receive VLAN packets;

a forwarding database configured to store one or more MAC destination address associated with one or more VLANs;

a media access control (MAC) limit database configured to store one or more MAC limit database entries, each MAC limit database entry associated with a VLAN and containings a limit of MAC addresses (MAC limit) for the VLAN and a count of MAC addresses of the VLAN; and

a processor configured to perform an action for controlling flooding of packets on a VLAN in response to the MAC count of the VLAN matching the MAC limit for the VLAN.

45. (PREVIOUSLY PRESENTED) The intermediate network node of claim 44, further comprising:

the processor configured to log a message, as the action for controlling flooding on the VLAN.

46. (PREVIOUSLY PRESENTED) The intermediate network node of claim 44, further comprising:

the processor configured to disable flooding for the VLAN, as the action for controlling flooding on the VLAN.

47. (PREVIOUSLY PRESENTED) The intermediate network node of claim 44, further comprising:

the processor configured to disable learning for the VLAN, as the action for controlling flooding on the VLAN.

48. (PREVIOUSLY PRESENTED) The intermediate network node of claim 44, further comprising:

the processor configured to shut down the VLAN, as the action for controlling flooding on the VLAN.

49. (PREVIOUSLY PRESENTED) The intermediate network node of claim 44, further comprising:

the processor configured to drop a VLAN packet, in response to receiving the VLAN packet for a shutdown VLAN.

50. (PREVIOUSLY PRESENTED) The intermediate network node of claim 44, further comprising:

the processor configured to look up a MAC source address of a VLAN packet in the forwarding table;

the processor configured to determine if learning is disabled for the VLAN, in response to not finding the MAC source address of the VLAN in the forwarding table; and

the processor configured to generate a forwarding database entry for the VLAN, if learning is not disabled for the VLAN.

51. (PREVIOUSLY PRESENTED) The intermediate network node of claim 44, further comprising:

the processor configured to determine if flooding is disabled for a VLAN, in response to not finding a MAC destination for a VLAN packet in the forwarding table;

the processor configured to drop the VLAN packet, if flooding is disabled; and

the process configured to flood the VLAN packet out all ports except a receiving port, if flooding is not disabled.

52. (PREVIOUSLY PRESENTED The intermediate network node of claim 44, further comprising:

the processor configured to look up a MAC limit for a VLAN in the MAC limit database.

53. (PREVIOUSLY PRESENTED) The method of claim 44, further comprising:

the processor configured to look up a MAC count for a VLAN in the MAC limit database; and

the processor configured to update the MAC count in the MAC limit database, in response to the MAC count not matching the MAC limit.

54. (CURRENTLY AMENDED) A computer readable media, comprising:

the computer readable media containing instructions for operating an intermediate network node for ~~the practice of the method of~~,

receiving a packet having a VLAN tag;

looking up a MAC destination address of the VLAN packet in a forwarding table;

looking up, in response to not finding the MAC destination address in the forwarding table, a limit of MAC addresses (MAC limit) of the VLAN; and

performing an action for controlling flooding of packets on the VLAN in response to a count of MAC addresses (MAC count) of the VLAN matching the MAC limit for the VLAN.